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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/574,093	11/28/2007	Valery Alexandrovich Astafiev	25065-33	9788
7590 John B Hardaway, III Nexsen Pruet, LLC P.O. Box 10107 Greenville, SC 29603		09/17/2009	EXAMINER MONDT, JOHANNES P	
			ART UNIT 3663	PAPER NUMBER PAPER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,093	Applicant(s) ASTAFIEV ET AL.
	Examiner JOHANNES MONDT	Art Unit 3663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on 28 November 2007.
- 2a) This action is FINAL. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 6 is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 1-5 and 7-20 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 31 July 2006 is/are: a) accepted or b) objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) Notice of References Cited (PTO-892)
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) Information Disclosure Statement(s) (PTO/SB/08)
 Paper No(s)/Mail Date 1 Form PTO-1449.
- 4) Interview Summary (PTO-413)
 Paper No(s)/Mail Date. _____.
- 5) Notice of Informal Patent Application
 6) Other: _____.

DETAILED ACTION

1. This Office action is in response to the filing of the application on 11/28/2007 as national stage of PCT/RU03/00422 filed on 9/29/2003.

Information Disclosure Statement

2. The examiner has considered the US patent item listed in the Information Disclosure Statement ('IDS') filed 3/29/2006. However, all foreign patent documents listed therein are in compliance with neither 37 C.F.R. 1.97 (2) nor are they all in compliance with 37 C.F.R. 1.97(3), because no copies of said foreign patent documents have been found in the file for any of said foreign patent documents. Accordingly, examiner herewith submits PTO-1449 with signature and date but items shown as lined-through have NOT been considered.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the claimed "unit for charging dosages of starting powdered components" (claim 11, lines 2-3) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet,

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and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. The specification is objected to for failing to provide enablement for the invention as defined by claim 3. The critical mass of the ferromagnetic needles is calculated by a formula in which a "criticality factor of loading the mixer with the needles" is an essential factor, while the term "criticality factor" within the current context is neither an accepted term in the art nor explained in the specification. Therefore, one of ordinary skill in the art would not know how to practice the invention because the critical mass upon which the needles stop rotating cannot possibly be calculated without said criticality factor while this factor is unknown. In particular, none of the prior art either identified by applicant, - in so far as said prior art is readable in English, defines or even merely uses

the term "criticality factor". The only term in the nuclear art that comes close to applicant's own inventive language is "criticality multiplication factor", which is clearly different (multiplication factor giving the ratio of neutrons born in one generation to the neutrons born in a previous generation (see p. 452 of Rahn et al), which obviously has nothing to do with a loading of the mixer with the needles. Therefore, considering the nature of the invention, the state of the prior art and the level of ordinary skill in the art undue experimentation would be needed to practice the invention defined by claims 2 and 6, predicated as this is to the calculation of the critical mass of the ferromagnetic needles. It is further added that no amount of direction nor working examples are provided by applicant. From the above it may be concluded that the claimed invention is not enabled. See *in re Wands factors* MPEP 2164.01(a).

Claim Objections

6. **Claim 6** is objected to under 37 CFR 1.75(c) as being in improper form because a multiple dependent claim should refer to other claims in the alternative only. See MPEP § 608.01(n). Accordingly, the claim has not been further treated on the merits.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

8. **Claim 2** is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The critical mass of the ferromagnetic needles is calculated by a formula in which a "criticality factor of loading the mixer with the needles" is an essential factor, while the term "criticality factor" within the current context is neither an accepted term in the art nor explained in the specification. Therefore, one of ordinary skill in the art would not know how to practice the invention because the critical mass upon which the needles stop rotating cannot possibly be calculated without said criticality factor while this factor is unknown. In particular, none of the prior art either identified by applicant, - in so far as said prior art is readable in English, defines or even merely uses the term "criticality factor". The only term in the nuclear art that comes close to applicant's own inventive language is "criticality multiplication factor", which is clearly different (multiplication factor giving the ratio of neutrons born in one generation to the neutrons born in a previous generation (see p. 452 of Rahn et al), which obviously has nothing to do with a loading of the mixer with the needles. Therefore, considering the nature of the invention, the state of the prior art and the level of ordinary skill in the art undue experimentation would be needed to practice the invention defined by claims 2 and 6, predicated as this is to the calculation of the critical mass of the ferromagnetic needles. It is further added that no amount of direction nor working examples are provided by applicant. From the

above it may be concluded that the claimed invention is not enabled. See *in re Wands* factors MPEP 2164.01(a).

9. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

10. ***Claims 1-5 and 7-10***, through claim 1, recite the limitation "the dosages of starting powdered components" in lines 3-4 of claim 1; actual line numbers, not specification page line numbers are used to indicate the lines). There is insufficient antecedent basis for this limitation in the claims.

11. ***Claims 1-5 and 7-10***, through claim 1, recite the limitation "the powders" in line 6. There is insufficient antecedent basis for this limitation in the claims.

12. ***Claims 1-5 and 7-10***, through claim 1, recite the limitation "the tube" in line 6. There is insufficient antecedent basis for this limitation in the claims.

13. ***Claims 1-5 and 7-10***, through claim 1, recites the limitation "the inductor coil" in line 7. There is insufficient antecedent basis for this limitation in the claim.

14. ***Claims 1-5 and 7-10***, through claim 1, recites the limitation "the inductor magnetic field" in line 8. There is insufficient antecedent basis for this limitation in the claim.

15. ***Claims 1-5 and 7-10***, through claim 1, recites the limitation "the resultant powder mixture" in line 10. There is insufficient antecedent basis for this limitation in the claim.

16. ***Claims 1-5 and 7-10***, through claim 1, line 10, recites the limitation "the granulation unit". There is insufficient antecedent basis for this limitation in the claim.

17. ***Claim 2***, through line 3, recites the limitation "the mixer electromagnetic field".

There is insufficient antecedent basis for this limitation in the claims.

18. ***Claim 2*** is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The metes and bounds of the claimed invention are vague and ill-defined due to inadequate written support in the specification through lack of enablement, with reference to section 4 above.

19. ***Claim 3***, through lines 5-6, recites the limitation "the electromagnetic field rotation zone". There is insufficient antecedent basis for this limitation in the claims.

20. ***Claim 4***, through lines 1-2, recites the limitation "the ceramic powders". There is insufficient antecedent basis for this limitation in the claims.

21. ***Claim 4***, through line 3, recite the limitation "the electromagnetic field rotation zone". There is insufficient antecedent basis for this limitation in the claims.

22. ***Claim 5***, through line 2, recites the limitation "their diameter". Noting that it is not at all inherent to a plurality of needles to have a single diameter, there is insufficient antecedent basis for this limitation in the claims.

23. ***Claim 7***, through lines 1-2, recite the limitation "rotation frequency of the electromagnetic field". There is insufficient antecedent basis for this limitation in the claims.

24. ***Claims 11-15*** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "said method" as recited in claim 11,

line 1, lacks antecedent basis because (a) claim 11 does not refer to any specific independent claim in which a unique method is claimed, and, even arguendo, (b) taken as a whole, thirteen ('13) different methods are defined through claims 1-10.

25. **Claims 11-15**, through claim 11, line 1, recite the limitation "the molding powder" in line 1. There is insufficient antecedent basis for this limitation in the claim.

26. **Claims 11-15**, through claim 11, line 3, recite the limitation "the container".

There is insufficient antecedent basis for this limitation in the claim.

27. **Claims 11-15** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The introduction of "a container" in line 7 of independent claim 11 results in two separate containers being claimed while only one single term ("container") is used to designate the container, whereby both "containers" are claimed in an indefinite manner.

28. **Claims 11-15**, through claim 11, line 12, recite the limitation "the granulation unit". There is insufficient antecedent basis for this limitation in the claim.

29. **Claims 11-15**, through claim 11, line 13, recite the limitation "the process boxes".

There is insufficient antecedent basis for this limitation in the claim.

30. **Claims 11-15**, through claim 11, final line, recite the limitation "the zone of the mixture granulation unit". There is insufficient antecedent basis for this limitation in the claim, both with regard to "the mixture granulation unit" and with regard to "the zone".

31. **Claims 11-15** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which

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applicant regards as the invention. The "unit for charging dosages" and "charging unit" may or may not be identical, different wording being used and no identification nor illustration identifying either, whereby the claims are rendered indefinite.

32. **Claim 13** is additionally rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The introduction of "a conveying box" (line 2) introduces lack of clarity since there already are, through independent claim 11, "conveying boxes", and so one of ordinary skill would not know whether the conveying box so introduced or recited belongs to the conveying boxes already recited in the independent claim; whereby the claim is rendered indefinite.

33. **Claim 14** recites the limitation "the load-bearing framework of the structure" in line 2, both with regard to "the load-bearing framework" and with regard to "the structure". There is insufficient antecedent basis for this limitation in the claim.

34. **Claims 17-20** recite the limitation "A device as claimed in claim 16" in their preambles (lines 1 all). There is insufficient antecedent basis for this limitation in the claim.

35. **Claims 16-20** are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The limitation "said method" as recited in claim 16, line 1, lacks antecedent basis because (a) claim 16 does not refer to any specific independent claim in which a unique method is claimed, and, even arguendo, (b) taken as a whole, thirteen ('13) different methods are defined through claims 1-10.

36. **Claims 16-20**, through claim 16, line 3, recite the limitation "the hermetic sealing unit". There is insufficient antecedent basis for this limitation in the claim, because nothing in the antecedent language inherently implies or recites hermetic quality.

Claim Rejections - 35 USC § 103

37. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

38. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

39. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

40. **Claims 1, 2, 4, 5 and 7-10 and 16-19** are rejected under 35 U.S.C. 103(a) as being unpatentable over Men'shikova et al (RU 2122247 C1), either alone or in view of Suzuki et al (US 6,130,262).

Note: the rejection is provided subject to the noted indefiniteness under 35 U.S.C. 112, 2nd par., as set forth above in sections 10-23, to the best of examiner's understanding.

As admitted by applicant in the specification, page 4, line 27 – page 5, line 8, Men'shikova et al teach a method defined by lines 1-10 of claim 1, i.e.:

a method for producing tablets of a ceramic nuclear fuel comprising the steps of preparing a molding powder, its granulation, pressing and sintering the resultant tablets, wherein the steps of preparing the molding powder comprises the operations of charging the dosages of starting powdered components and a grinding process initiating agent into a container made of a non-magnetic material, hermetically sealing the container, putting the container together with the powders and ferromagnetic needles into the interior of the tube made of a non-magnetic material placed inside the inductor coil, grinding and intermixing the powders under the action of the ferromagnetic needles moving in the inductor magnetic field, withdrawing the container from the tube, cooling the container, unsealing the container, and discharging the resultant powder mixture therefrom into the granulation unit; and

although applicant does not admit Men'shikova et al to teach the additional limitations defined by lines 11-19 of claim 1, to the best of examiner's

understanding of the reference in the absence of a translation, - which is not found in the file, Men'shikova et al disclose the **working zone 2/3** as claimed (2 = the needles, 3= material to be treated) and having the **capability** to constantly accommodate said (ferromagnetic) needles and an **end zone, defined as a region separated from 2/3 by a non-magnetic glass partition 4** (see Figure 1 and page 3, lines 30-40), Said partition, being made of glass, is impervious to needles, the **container as defined by the glass wall 4 as a whole but comprising said partition** meets the claimed container, the dosages of the powders being *capable* of being charged into the working zone through the end zone and partition; the tube as defined by the outer walls of the cylindrical pipe (see Figure 1) meets the claimed "tube" for the height of the working zone (Figure 1); since by admission of applicants the container is positioned, during the method, inside the inductor coil, the limitation "said tube being positioned vertically inside the conductor coil" merely defines one of the three Cartesian coordinates that may be used to describe the direction or position of any structural feature, and hence is inherently met; the limitation that the powders are treated by virtue of the ferromagnetic needles moving in the working zone is inherent by their presence in the simultaneous presence of the "action of the ferromagnetic needles moving in the inductor magnetic field" as admitted to be disclosed by applicants (see above).

Although the reference does not necessarily teach the limitation that the resultant powder mixture is discharged from the container via the partition and

the end zone without unloading the ferromagnetic needles from the working zone, discharging the material end product form the axial extremities of a working zone in a tube would have been entirely obvious to one of ordinary skill in the art, said discharging being a logical necessity for the use of an end product while for discharging only two possibilities exist: discharging through the side walls, and discharging through the axial ends. At the very least, then, the claim limitation is obvious as rational (E) provided in the list of obviousness rationales, i.e., "Obvious to try" – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success (MPEP 2141, III), the solution being predictable because there is nothing unpredictable about discharging a mixture of oxides from a container.

Although the reference does not necessarily disclose that the partition is "meshed", the use of meshed partitions has long been recognized in the art of relevance to the specific purpose of selective discharge, as shown for instance by Suzuki et al, who, in a patent on recovery of an end compositional product of stirring process, - hence analogous art, teach a partition 61 (col. 8, l. 39-56) to have many holes, hence meeting "meshed", so as to let only the desired end product emerge. Adoption of the meshed quality of the glass partition would have been obvious to one of ordinary skill in the art as a known technique to improve similar devices with predictable results and hence meets the obviousness rationale C of MPEP 2141, III. One of ordinary skill in the art would understand that only the "meshed" aspect and not the selection of "metal" of Suzuki would

have been obvious to adopt from Suzuki et al, given the teachings by Men'shikova et al, especially the reliance on magnetic induction as interior stirring means, because otherwise the metal partition itself would conduct eddy currents quite unnecessarily. From the above discussion it is concluded that the independent claim 1 is obvious over Men'shikova et al in view of Suzuki et al.

Furthermore, even *arguendo* the above paragraph, it is noted that applicants do not impose any limitation on the mesh size in their independent claim, while examiner takes official notice that glass is semi-permeable, i.e., certain substances may permeate glass while other substances do not, depending on their size, and on the type of glass; hence glass is meshed. Especially in view of the absence of a full translation in English of a reference admitted by applicants as vital to understand the state of the art, examiner takes the position that the burden is to applicant to show how Men'shikova et al would fail to teach what is necessary to arrive at the claimed invention from what applicants admit Men'shikova et al indeed do teach, for which reason Suzuki et al is not deemed necessary as a secondary reference.

Finally, it is noted that the claims contain functional language, i.e., language expressing intended use: for instance, "working zone adapted to..." (line 12 of claim 1); . Although the claims are process claims, in as far as limitations further limiting structural components or compositions are concerned, applicants are reminded that intended use and other types of functional language must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed

invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim. In a claim drawn to a process of making, the intended use must result in a manipulative difference as compared to the prior art. *In re Casey*, 152 USPQ 235 (CCPA 1967); *In re Otto*, 136 USPQ 458, 459 (CCPA 1963).

On claims 4-5: Men'shikova et al teach the claimed ranges (see English abstract).

With regard to claims 2, 7, 8 and 9, the further limitations defined by said claims are range limitations only. Applicant is reminded that it has been held that Applicant's disclosure does not teach why the range as claimed is critical to the invention. In view of the absence of a teaching why a range is critical to the invention Applicant is reminded that it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or working ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore, even *arguendo*, in view of the absence of a full translation in English of a reference admitted by applicants as vital to understand the state of the art, examiner takes the position that the burden is to applicant to show how Men'shikova et al would fail to teach what is necessary to arrive at the claimed invention from what applicants admit that Men'shikova et al do teach.

On claim 10: it would at least be obvious to have an inert gas atmosphere since air, which is an obvious selection as a component of even a most controlled atmosphere if only for unavoidable impurities, comprises several

gases considered to be inert, *inter alia* helium and nitrogen, for which examiner takes official notice.

On claim 16: as admitted by applicants as taught by Men'shikova et al, a container is capable of being used with a method of producing tablets as described, is a cylinder-shaped vessel from a non-magnetic material provided with a sealing unit at an end thereof (cover) (see page 3 of the specification, lines 3-7). Furthermore, the limitation "transversal meshed partition impervious to ferromagnetic needles" is obvious over Suzuki et al, with reference to the discussion of claim 1 above, in conjunction with an interpretation of transversal as being transversal to the axis of the container or the tube. Also, "hermetic" is recited through antecedence "the hermetic sealing unit" and hence is presumed met by the sealing unit by Men'shikova et al to which it refers.

Although Men'shikova et al do not necessarily teach the limitations "valve having an interior space isolated from the cylinder-shaped vessel of the container" by said transversal meshed partition, "said valve being connected to said cylindrical vessel via a flanged joint", it would have been obvious to include said limitations in view of Suzuki et al, who, in a patent on recovery of an end compositional product of stirring process, - hence analogous art, teach a partition 61 (col. 8, l. 39-56) to have many holes, hence meeting "meshed", so as to let only the desired end product emerge, and also teach ball valve 69 having an interior space isolated from the cylinder-shaped vessel of the container 42 (col. 8, l. 18-56 and Figure 5, title and abstract), said valve 69 being connected to said

cylindrical vessel 42 via a flanged joint ("flanged joint" being met by the L-shaped upwardly extending flanges connecting 69 with 42 in Figure 5). The inclusion of a ball valve would have been obvious to one of ordinary skill in the art as a means of *controlling access* to the container: Evidently, access and its control are important also for the container also in Men'shikova, as the container contains the working zone in which the contents have to be carefully selected.

Again, especially in view of the absence of a full translation in English of a reference admitted by applicants as vital to understand the state of the art, examiner takes the position that the burden is to applicant to show how Men'shikova et al would fail to teach what is necessary to arrive at the claimed invention from what applicants admit Men'shikova et al indeed do teach, for which reason Suzuki et al is not deemed necessary as a secondary reference.

On claim 17: the flanged joint is separable, for instance by removing the flanged joint, being a separate structural component clearly distinguished from its surrounding material by interfaces (see Figure 5).

On claim 18: the ball valve 69 appears as a ball cock. Examiner takes official notice that ball valves are members of the family of quarter turn valves for which the limitation is inherent.

On claim 19: the lower flanges on either side of the middle section containing the ball valve (Figure 5) provides a platform for the container as well, and because of the fixed relative position and connection between platform and container help in fixing the container to be fixed stationary and positioned.

41. **Claims 11-12 and 15** are rejected under 35 U.S.C. 103(a) as being unpatentable over either Applicants' Admission of Prior Art alone or Men'shikova et al alone, or Applicants' Admission of Prior Art in view of Men'shikova et al (RU 2 122 247 C1), vice versa.

Note: the rejection is made subject to the noted indefiniteness under 35 U.S.C. 112, 2nd par., as detailed above, to the best of examiner's understanding.

Applicants admit as prior art (see specification, page 6, lines 15-22) a device comprising a protective chamber, a unit for charging dosages of starting powdered components and a grinding process initiating agent into the container, a grinding and intermixing unit for the powders, appearing as an inductor having a coil inside which a tube of a non-magnetic material is put, adapted to receive a hermetically sealed cylinder-shaped container of a non-magnetic material adapted to hold the powders and needles from a ferromagnetic material, a powder granulation unit, as well as a container conveying and positioning system), said grinding and intermixing unit for the powders involves vertically.

Furthermore, as proto-type in the prior art applicants state they consider the device by Men'shikova et al with axes of the grinding and intermixing unit for the powders and of the inductor arranged horizontally (page 2, line 24 - page 3, line 7), while what is vertical and what is horizontal is, in the absence of a single defined coordinate system, a matter of choosing a coordinate system, and as such does not distinguish. Furthermore, from Men'shikova et al, Figure 1 it is evident that what can be interpreted to be a lower part of the tube is blanked off (i.e., closed off) (see non-

magnetic glass partition 4) to form a fragment of the protective chamber (see Figure 1). The limitation "appears as a circuit" is a limitation of impression rather than of actual structural import, and hence is considered in the eye of the beholder. Furthermore, the limitation "the container is adapted.....to the charging unit", lines 11-13 of claim 11, limits how the container has been adapted, i.e., limits the process by which the container was made, but not the container as structure, and hence is a product-by-process limitation. The limitation is only of patentable weight in as much as the method steps distinguish the final structure, and to the extent not impacting final structure are taken to be product-by-process limitations and non-limiting. A product by process claim is directed to the product per se, no matter how they are actually made. See *In re Fessman*, 180 USPQ 324, 326 (CCPA 1974); *In re Marosi et al.*, 218 USPQ 289, 292 (Fed. Cir. 1983), and *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make clear that it is the patentability of the final structure of the product "gleaned" from the process steps that must be determined in a "product-by-process" claim, and not the patentability of the process. See also MPEP 2113. Moreover, an old or obvious product produced by a new method is not a patentable product, whether claimed in "product by process" claims or not. Also, the limitation "said circuit of the protective chamber is formed by....of the mixture granulation unit" only further limits its process of making, not the structure itself, and hence is a product-by-process limitation. The limitation is only of patentable weight in as much as the method steps distinguish the final structure, and to the extent not impacting final structure are taken to be product-by-process limitations and non-

limiting. A product by process claim is directed to the product per se, no matter how they are actually made. See *In re Fessman*, 180 USPQ 324, 326 (CCPA 1974); *In re Marosi et al.*, 218 USPQ 289, 292 (Fed. Cir. 1983), and *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985), all of which make clear that it is the patentability of the final structure of the product "gleaned" from the process steps that must be determined in a "product-by-process" claim, and not the patentability of the process. See also MPEP 2113.

It would have been obvious to include the features in Men'shikova et al of what applicant admits to be the closest prior art adopted as proto-type into what applicant subsequently admits to be a known device.

Furthermore, even *arguendo*, in view of the absence of a full translation in English of a reference admitted by applicants as vital to understand the state of the art, examiner takes the position that the burden is to applicant to show how Men'shikova et al would fail to teach what is necessary to arrive at the claimed invention at least through obviousness from what applicants admit that Men'shikova et al do teach.

On claim 12: it would at least be obvious to have an inert gas atmosphere since air, which is an obvious selection as a component of even a most controlled atmosphere if only for unavoidable impurities, comprises several gases considered to be inert, *inter alia* helium and nitrogen, for which examiner takes official notice.

On claim 15: the further limitation of this claim fails to further limit the claimed invention as defined by claim 11, because of the limitation therein that reciting the

"inductor having a coil inside which a tube from a non-magnetic material is put, adapted to receive the container".

Conclusion

42. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JOHANNES MONDT whose telephone number is (571)272-1919. The examiner can normally be reached on 8-17.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jack W. Keith can be reached on 571-272-6878. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JOHANNES MONDT/
Primary Examiner, Art Unit 3663